

CLAIMS

I claim:

1 1. A magnetic assembly, comprising:
2 a hollow cylindrical metal support sleeve;
3 at least one magnet positioned on a surface of said support sleeve;
4 at least one beveled bearing surface on said at least one magnet, said bearing
5 surface being beveled at a first acute angle relative to said support sleeve;
6 at least one mounting bracket fastened to said support sleeve; and
7 at least one angled lip on said at least one mounting bracket contacting said at
8 least one beveled bearing surface on said at least one magnet, thereby
9 holding said at least one magnet in place on said support sleeve, said at
10 least one lip extending at a second acute angle over said at least one
11 beveled bearing surface.

1 2. The magnetic assembly recited in claim 1, further comprising at least one
2 slot formed through a wall of said support sleeve, said at least one slot being oriented
3 substantially parallel to the longitudinal axis of said support sleeve.

1 3. The magnetic assembly recited in claim 2, further comprising a plurality of
2 said slots formed through said wall of said support sleeve.

1 4. The magnetic assembly recited in claim 1, wherein said first acute angle is
2 greater than said second acute angle.

1 5. The magnetic assembly recited in claim 1, further comprising:
2 a plurality of said magnets positioned on said surface of said support sleeve; and
3 a plurality of beveled bearing surfaces on said plurality of magnets, each said
4 bearing surface being beveled at a first acute angle relative to said support
5 sleeve, each said bearing surface being contacted by said at least one lip on
6 said at least one mounting bracket, angled at a second acute angle relative
7 to said support sleeve, to hold said plurality of magnets in place on said
8 support sleeve.

1 6. The magnetic assembly recited in claim 5, wherein:
2 said at least one bracket comprises at least one mounting ring circumferentially
3 fastened to said support sleeve; and
4 said at least one angled lip extends from said at least one mounting ring over said
5 plurality of beveled bearing surfaces on said plurality of magnets.

1 7. The magnetic assembly recited in claim 6, further comprising:
2 two of said beveled bearing surfaces on each said magnet, each said bearing
3 surface being beveled at a first acute angle relative to said support sleeve;
4 and
5 two of said mounting rings, each said mounting ring having an angled lip
6 extending over one of said beveled bearing surfaces on each said magnet,
7 each said lip being angled at a second acute angle relative to said support
8 sleeve;
9 wherein said first acute angle is greater than said second acute angle.

1 8. The magnetic assembly recited in claim 7, wherein said first acute angle is
2 greater than said second acute angle by between two degrees and four degrees.

1 9. The magnetic assembly recited in claim 8, wherein said first acute angle is
2 about 45 degrees.

1 10. The magnetic assembly recited in claim 1, wherein said at least one angled
2 lip contacts said at least one beveled bearing surface along a single line of contact.

1 11. The magnetic assembly recited in claim 1, wherein said at least one
2 magnet is positioned on an outer peripheral surface of said support sleeve.

1 12. The magnetic assembly recited in claim 1, wherein the north pole of said
2 at least one magnet is oriented radially outwardly from said support sleeve.

1 13. A magnetic assembly, comprising:
2 a hollow cylindrical metal support sleeve;
3 a plurality of magnets positioned on an outer peripheral surface of said support
4 sleeve;
5 two beveled bearing surfaces on each said magnet, each said bearing surface being
6 beveled at a first acute angle relative to said support sleeve;
7 two mounting rings fastened to said support sleeve at spaced apart locations, with
8 said plurality of magnets being positioned between said mounting rings;
9 and
10 an angled lip on each said mounting ring contacting one of said beveled bearing
11 surfaces on each said magnet, thereby holding said plurality of magnets in
12 place on said support sleeve, said angled lips extending at a second acute
13 angle over said beveled bearing surfaces.

1 14. The magnetic assembly recited in claim 13, further comprising a plurality
2 of slots formed through a wall of said support sleeve, said plurality of slots being oriented
3 substantially parallel to the longitudinal axis of said support sleeve.

1 15. The magnetic assembly recited in claim 13, wherein said first acute angle
2 is greater than said second acute angle.

1 16. The magnetic assembly recited in claim 13, wherein said first acute angle
2 is greater than said second acute angle by between two degrees and four degrees.

1 17. The magnetic assembly recited in claim 16, wherein said first acute angle
2 is about 45 degrees.

1 18. The magnetic assembly recited in claim 13, wherein each said angled lip
2 contacts each said beveled bearing surface along a single line of contact.

1 19. The magnetic assembly recited in claim 13, wherein the north poles of said
2 plurality of magnets are oriented radially outwardly from said support sleeve.